

**Amendments to the Claims:**

This listing of the claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

1-2 (Canceled)

3 (Currently amended): A method of designing a redox flow battery system comprising the steps of:

determining a difference between an output of power generation of generating equipment that varies irregularly in output of power generation, and a desired target output obtained by smoothing the output of power generation,

determining an average value and a standard deviation of a distribution of the output difference,

determining at least one of a specified output of the redox flow battery, number of the batteries, a specified output of a DC/AC converter for converting the battery output, and number of the DC/AC converters for converting the battery output, to maximize a system efficiency of the system or to minimize a loss rate of the system, based on the average value and the standard deviation.

4 (Canceled)

5 (Canceled)

6 (New): The method of designing a redox flow battery system according to claim 3, wherein when the difference between an output of power generation of generating equipment that varies irregularly in output of power generation, and a desired target output obtained by smoothing the output of power generation is an external parameter, and the at least one of a

specified output of the redox flow battery, number of the batteries, a specified output of a DC/AC converter for converting the battery output, and number of DC/AC converters for converting the battery output is an internal parameter, the method comprises the steps of:

letting a performance index comprising the system efficiency or the loss rate be a characteristic function of the external parameter and the internal parameter,

rewriting the characteristic function as a new characteristic function in the form of an equation of a high degree considering the average value and the standard deviation, and

determining the internal parameter from the condition that takes a local extreme value in the equation of high degree.

7 (New): The method of designing a redox flow battery system according to claim 6, wherein the new characteristic function in the form of an equation of a high degree is a characteristic in the form of a quadratic equation.

8 (New): The method of designing a redox flow battery system according to claim 6, wherein the new characteristic function in the form of an equation of a high degree is a characteristic function in the form of a cubic or more equation.